

Supplementary data

Demography, Structure, and Composition of a Low-Disturbance Forest in Luzon, Philippines

Table S1. List of species lost from the 2011 to 2015 census in the Maluyon Permanent Forest Dynamics Plot

Species
<i>Ficus</i> sp. 06
<i>Garcinia</i> cf. <i>linearifolia</i>
Unidentified, Serrated-long
<i>Leucosyke</i> sp. 01
<i>Syzygium</i> sp. 11

Table S2. The most abundant species in the Maluyon Permanent Forest Dynamics Plot in 2015 with tree density ≥ 100 individuals/ha.

Species	Family	Relative abundance (%)	Basal Area (cm ²)	Density (individuals/ha)	Max DBH (cm)	Mean DBH (cm)
<i>Camellia lanceolata</i>	Theaceae	19.04%	34,000	1,003	18.9	3.93
<i>Mangifera monandra</i>	Anacardiaceae	9.20%	235,000	485	63.1	11.71
<i>Cinnamomum mercadoi</i>	Lauraceae	7.90%	41,300	416	30.5	5.91
<i>Garcinia rubra</i>	Clusiaceae	3.80%	3,260	200	13	2.64
<i>Allophylus cobbe</i>	Sapindaceae	3.70%	51,600	195	56.1	8.19
<i>Anisoptera thurifera</i>	Dipterocarpaceae	3.26%	51,900	172	83	8.72
<i>Atalantia racemose</i>	Rutaceae	2.79%	3,450	147	12.8	3.16
<i>Syzygium</i> sp. 02	Myrtaceae	2.46%	45,800	130	34.9	11.71
<i>Memecylon sorsogonense</i>	Melastomataceae	2.28%	825	120	13	1.84
<i>Palaquium bataanense</i>	Sapotaceae	2.18%	12,900	115	42.2	6.18
<i>Syzygium</i> sp. 01	Myrtaceae	2.10%	10,700	111	31.9	5.68
Other species (n=161)		41.29%	413,420			

Table S3. Top 20 species with the highest basal area in the Maluyon Permanent Forest Dynamics Plot in 2011

Rank	Species	Family	2011 Basal area (cm ²)
1	<i>Mangifera monandra</i>	Anacardiaceae	231,000
2	<i>Calophyllum</i> sp.	Calophyllaceae	51,500
3	<i>Anisoptera thurifera</i>	Dipterocarpaceae	48,700
4	<i>Syzygium</i> sp. 02	Myrtaceae	47,800
5	<i>Allophylus cobbe</i>	Sapindaceae	46,500
6	<i>Cinnamomum mercadoi</i>	Lauraceae	40,600
7	<i>Lithocarpus</i> cf. <i>caudatifolium</i>	Fagaceae	34,400
8	<i>Camellia lanceolata</i>	Theaceae	33,900
9	<i>Shorea contorta</i>	Dipterocarpaceae	25,500
10	<i>Adinandra</i> sp. 01	Pentaphylacaceae	22,900
11	<i>Ternstroemia gitingensis</i>	Pentaphylacaceae	17,900
12	<i>Lithocarpus</i> cf. <i>philippinensis</i>	Fagaceae	16,600
13	<i>Calophyllum pentapetalum</i>	Calophyllaceae	14,800
14	<i>Symplocos</i> sp. 01	Symplocaceae	14,300
15	<i>Palaquium bataanense</i>	Sapotaceae	13,300
16	<i>Syzygium</i> sp. 04	Myrtaceae	12,900

Table S3. Top 20 species with the highest basal area in the Maluyon Permanent Forest Dynamics Plot in 2011 (cont.)

Rank	Species	Family	2011 Basal area (cm ²)
17	<i>Syzygium</i> sp. 01	Myrtaceae	10,900
18	<i>Diospyros</i> sp. 01	Ebenaceae	10,600
19	<i>Archidendron clypearia</i>	Fabaceae	10,300
20	<i>Elaeocarpus</i> sp.	Elaeocarpaceae	7,460

Table S4. Top 20 species with the highest basal area in the Maluyon Permanent Forest Dynamics Plot in 2015

Rank	Species	Family	2015 Basal area (cm ²)
1	<i>Mangifera monandra</i>	Anacardiaceae	235,000
2	<i>Calophyllum</i> sp.	Calophyllaceae	51,500
3	<i>Anisoptera thurifera</i>	Dipterocarpaceae	51,900
4	<i>Syzygium</i> sp. 02	Myrtaceae	45,800
5	<i>Allophylus cobbe</i>	Sapindaceae	51,600
6	<i>Cinnamomum mercadoi</i>	Lauraceae	41,300
7	<i>Lithocarpus</i> cf. <i>caudatifolium</i>	Fagaceae	31,400
8	<i>Camellia lanceolata</i>	Theaceae	34,000
9	<i>Shorea contorta</i>	Dipterocarpaceae	26,600
10	<i>Adinandra</i> sp. 01	Pentaphylacaceae	24,000
11	<i>Ternstroemia gitingensis</i>	Pentaphylacaceae	19,100
12	<i>Lithocarpus</i> cf. <i>philippinensis</i>	Fagaceae	15,700
13	<i>Calophyllum pentapetalum</i>	Calophyllaceae	14,600
14	<i>Symplocos</i> sp. 01	Symplocaceae	14,900
15	<i>Palaquium bataanense</i>	Sapotaceae	12,900
16	<i>Syzygium</i> sp. 04	Myrtaceae	12,900
17	<i>Syzygium</i> sp. 01	Myrtaceae	10,700
18	<i>Diospyros</i> sp. 01	Ebenaceae	10,300
19	<i>Archidendron clypearia</i>	Fabaceae	9,450
20	<i>Elaeocarpus</i> sp.	Elaeocarpaceae	8,430

Table S5. Importance Value Index (IVI) computation of the top 20 most abundant species

Species	Frequency	Basal area	Relative abundance	Relative frequency	Relative basal area	Total IVI
<i>Camellia lanceolata</i>	50	33,900	18.95	2.00	0.04	20.99
<i>Mangifera monandra</i>	50	230,600	9	2.00	0.30	11.30
<i>Cinnamomum mercadoi</i>	50	40,600	7.89	2.00	0.05	9.94
<i>Allophylus cobbe</i>	46	46,500	3.7	1.84	0.06	5.60
<i>Garcinia rubra</i>	50	3,080	3.54	2.00	0.00	5.54
<i>Anisoptera thurifera</i>	50	48,700	3.26	2.00	0.06	5.32
<i>Syzygium</i> sp. 02	31	47,800	2.77	1.24	0.06	4.07
<i>Atalantia racemosa</i>	47	3,170	2.64	1.88	0.00	4.52
<i>Syzygium</i> sp. 01	22	10,900	2.24	0.88	0.01	3.13
<i>Palaquium bataanense</i>	48	13,300	2.19	1.92	0.02	4.12
<i>Memecylon sorsogonense</i>	50	670	2.15	2.00	0.00	4.15
<i>Aporosa sympliocifolia</i>	38	5,920	1.93	1.52	0.01	3.46

Table S6. List of 96 species with 0% mortality rate

Species	N ₂₀₁₁	D ₂₀₁₅	Annualized mean rate (%/year)	Confidence interval	
				Lower	Upper
<i>Aglaia</i> sp. 03	1	0	0	0	0.46111
<i>Aglaia</i> sp. 05	2	0	0	0	0.307407
<i>Aglaia</i> cf. <i>argentea</i>	1	0	0	0	0.46111
<i>Aglaia elliptica</i>	1	0	0	0	0.46111
<i>Aglaia luzoniensis</i>	12	0	0	0	0.07094
<i>Alstonia scholaris</i>	1	0	0	0	0.46111
<i>Antidesma</i> sp. 01	11	0	0	0	0.076852
<i>Aphanamixis polystachia</i>	23	0	0	0	0.038426
<i>Ardisia</i> sp. 01	16	0	0	0	0.054248
<i>Artocarpus</i> sp. 01	1	0	0	0	0.46111
<i>Artocarpus</i> sp. 02	2	0	0	0	0.307407
<i>Artocarpus</i> sp. 03	9	0	0	0	0.092222
<i>Artocarpus</i> sp. 04	2	0	0	0	0.307407
<i>Artocarpus</i> cf. <i>cumingiana</i>	1	0	0	0	0.46111
<i>Astronia williamsii</i>	12	0	0	0	0.07094
<i>Buchanania</i> sp. 01	2	0	0	0	0.307407
<i>Buchanania</i> sp. 02	1	0	0	0	0.46111
<i>Calophyllum blancoi</i>	5	0	0	0	0.153703
<i>Canarium asperum</i>	18	0	0	0	0.048538
<i>Canarium</i> cf. <i>gracile</i>	3	0	0	0	0.230555
<i>Capparis lanceolaris</i>	2	0	0	0	0.307407
<i>Casearia fuliginosa</i>	1	0	0	0	0.46111
<i>Casearia</i> sp. 02	8	0	0	0	0.102469
<i>Celastrus</i> sp. 02	1	0	0	0	0.46111
<i>Celastrus</i> sp. 03	4	0	0	0	0.184444
<i>Celtis luzonica</i>	2	0	0	0	0.307407
<i>Champeria manillana</i>	49	0	0	0	0.018444
<i>Chionanthus</i> sp. 01	4	0	0	0	0.184444
<i>Chisocheton</i> cf. <i>pentandrus</i>	1	0	0	0	0.46111
<i>Citrus hystrix</i>	4	0	0	0	0.184444
<i>Clausena</i> cf. <i>sanki</i>	4	0	0	0	0.184444
<i>Codiaeum</i> cf. <i>megalanthum</i>	1	0	0	0	0.46111
<i>Connarus</i> cf. <i>monocarpus</i>	6	0	0	0	0.131746
<i>Cratoxylum sumatranum</i>	1	0	0	0	0.46111
<i>Croton</i> sp. 01	2	0	0	0	0.307407
<i>Cryptocaria</i> cf. <i>tomentosa</i>	13	0	0	0	0.065873
<i>Cynometra</i> sp. 01	7	0	0	0	0.115277
<i>Cynometra inaequifolia</i>	27	0	0	0	0.032936
<i>Diospyros</i> sp. 02	2	0	0	0	0.307407
<i>Diospyros maritima</i>	2	0	0	0	0.307407
<i>Heritiera sylvatica</i>	1	0	0	0	0.46111
<i>Dysoxylum</i> sp. 01	12	0	0	0	0.07094
<i>Dysoxylum</i> sp. 03	2	0	0	0	0.307407
<i>Dysoxylum</i> sp. 04	1	0	0	0	0.46111
<i>Dysoxylum excelsum</i>	1	0	0	0	0.46111

Table S6. List of 96 species with 0% mortality rate (cont.)

Species	N ₂₀₁₁	D ₂₀₁₅	Annualized mean rate (%/year)	Confidence interval	
				Lower	Upper
<i>Elaeocarpus</i> sp. 01	4	0	0	0	0.184444
<i>Enicosanthum</i> cf. <i>klemmei</i>	6	0	0	0	0.131746
<i>Ficus</i> sp. 01	4	0	0	0	0.184444
<i>Ficus</i> sp. 03	2	0	0	0	0.307407
<i>Ficus</i> sp. 05	1	0	0	0	0.461111
<i>Ficus</i> sp. 06	2	0	0	0	0.307407
<i>Ficus carpenteriana</i>	1	0	0	0	0.461111
<i>Ficus cumingii</i>	3	0	0	0	0.230555
<i>Ficus</i> sp. 11	3	0	0	0	0.230555
<i>Ficus pseudopalma</i>	3	0	0	0	0.230555
<i>Ficus septica</i>	3	0	0	0	0.230555
<i>Ficus</i> sp. 14	2	0	0	0	0.307407
<i>Ficus variegata</i>	3	0	0	0	0.230555
<i>Garcinia</i> sp. 03	2	0	0	0	0.307407
<i>Garcinia</i> sp. 04	1	0	0	0	0.461111
<i>Gardenia pseudopsidium</i>	6	0	0	0	0.131746
<i>Glochidion</i> sp. 01	4	0	0	0	0.184444
<i>Glochidion</i> sp. 02	3	0	0	0	0.230555
<i>Gomphandra luzoniensis</i>	2	0	0	0	0.307407
Unidentified sp. 14	6	0	0	0	0.131746
Unidentified sp. 17	2	0	0	0	0.307407
<i>Kibara coriaceae</i>	3	0	0	0	0.230555
<i>Leucosyke capitellata</i>	2	0	0	0	0.307407
<i>Lithocarpus</i> sp. 04	10	0	0	0	0.083838
<i>Lithocarpus</i> sp. 05	1	0	0	0	0.461111
<i>Litsea</i> sp. 01	2	0	0	0	0.307407
<i>Magnolia</i> cf. <i>candollii</i>	30	0	0	0	0.029749
<i>Melicope</i> sp. 01	1	0	0	0	0.461111
<i>Myristica</i> cf. <i>philippinensis</i>	5	0	0	0	0.153703
<i>Ormosia calavensis</i>	36	0	0	0	0.024925
<i>Palaquium</i> cf. <i>cuneifolium</i>	4	0	0	0	0.184444
<i>Palaquium</i> cf. <i>foxworthyi</i>	5	0	0	0	0.153703
<i>Palaquium</i> cf. <i>lanceolatum</i>	1	0	0	0	0.461111
<i>Palaquium</i> cf. <i>philippense</i>	5	0	0	0	0.153703
<i>Phyllantaceae</i> sp. 01	1	0	0	0	0.461111
<i>Planchonella</i> sp. 01	6	0	0	0	0.131746
<i>Psychotria</i> sp. 01	27	0	0	0	0.032936
<i>Radermachera pinnata</i>	5	0	0	0	0.153703
<i>Scolopia luzonensis</i>	3	0	0	0	0.230555
<i>Shorea polysperma</i>	7	0	0	0	0.115277
<i>Sterculia</i> sp. 03	4	0	0	0	0.184444
<i>Symplocos</i> sp. 02	1	0	0	0	0.461111
<i>Syzygium</i> sp. 05	13	0	0	0	0.065873
<i>Syzygium</i> sp. 06	10	0	0	0	0.083838
<i>Syzygium th</i> sp. 07	6	0	0	0	0.131746

Table S6. List of 96 species with 0% mortality rate (cont.)

Species	N ₂₀₁₁	D ₂₀₁₅	Annualized mean rate (%/year)	Confidence interval	
				Lower	Upper
<i>Syzygium</i> sp. 08	4	0	0	0	0.184444
<i>Syzygium</i> sp. 10	1	0	0	0	0.46111
<i>Syzygium</i> sp. 12	5	0	0	0	0.153703
<i>Tarrenoidea wallichii</i>	5	0	0	0	0.153703
<i>Turpinia</i> sp. 01	9	0	0	0	0.092222
<i>Vatica mangachapoi</i>	38	0	0	0	0.023647

Table S7. List of 88 species with 0% recruitment rate.

Species	N ₂₀₁₁	D ₂₀₁₅	Annualized mean rate (%/year)	Confidence interval	
				Lower	Upper
<i>Actinodaphne</i> cf. <i>intermedia</i>	9	0	0	0	0.092222
<i>Aglaia</i> sp. 03	1	0	0	0	0.46111
<i>Aglaia</i> sp. 05	2	0	0	0	0.307407
<i>Aglaia</i> cf. <i>argentea</i>	1	0	0	0	0.46111
<i>Aglaia</i> cf. <i>pyriformis</i>	47	0	0	0	0.019213
<i>Alstonia scholaris</i>	1	0	0	0	0.46111
<i>Antidesma</i> sp. 01	11	0	0	0	0.076852
<i>Aphanamixis polystachia</i>	23	0	0	0	0.038426
<i>Ardisia</i> sp. 01	16	0	0	0	0.054248
<i>Artocarpus</i> sp. 02	2	0	0	0	0.307407
<i>Artocarpus</i> sp. 03	9	0	0	0	0.092222
<i>Artocarpus</i> sp. 04	2	0	0	0	0.307407
<i>Artocarpus</i> cf. <i>cumingiana</i>	1	0	0	0	0.46111
<i>Astronia williamsii</i>	12	0	0	0	0.07094
<i>Buchanania</i> sp. 01	2	0	0	0	0.307407
<i>Buchanania</i> sp. 02	1	0	0	0	0.46111
<i>Calophyllum</i> sp. 03	55	0	0	0	0.016468
<i>Canarium</i> cf. <i>gracile</i>	3	0	0	0	0.230555
<i>Capparis lanceolaris</i>	2	0	0	0	0.307407
<i>Casearia fuliginosa</i>	1	0	0	0	0.46111
<i>Casearia</i> sp. 02	8	0	0	0	0.102469
<i>Celastrus</i> sp. 03	4	0	0	0	0.184444
<i>Celtis luzonica</i>	2	0	0	0	0.307407
<i>Chionanthus</i> sp. 01	4	0	0	0	0.184444
<i>Chisocheton</i> cf. <i>pentandrus</i>	1	0	0	0	0.46111
<i>Citrus hystrix</i>	4	0	0	0	0.184444
<i>Clausena</i> cf. <i>sanki</i>	4	0	0	0	0.184444
<i>Codiaeum</i> cf. <i>megalanthum</i>	1	0	0	0	0.46111
<i>Connarus</i> cf. <i>monocarpus</i>	6	0	0	0	0.131746
<i>Cratoxylum sumatranum</i>	1	0	0	0	0.46111
<i>Cynometra</i> sp. 01	7	0	0	0	0.115277
<i>Diospyros</i> sp. 02	2	0	0	0	0.307407
<i>Diospyros maritima</i>	2	0	0	0	0.307407
<i>Diplodiscus paniculatus</i>	53	0	0	0	0.017078

Table S7. List of 88 species with 0% recruitment rate (cont.)

Species	N ₂₀₁₁	D ₂₀₁₅	Annualized mean rate (%/year)	Confidence interval	
				Lower	Upper
<i>Dysoxylum</i> sp. 02	5	0	0	0	0.153703
<i>Dysoxylum</i> sp. 03	2	0	0	0	0.307407
<i>Dysoxylum</i> sp. 04	1	0	0	0	0.46111
<i>Enicosanthum</i> cf. <i>klemmei</i>	6	0	0	0	0.131746
<i>Ficus</i> sp. 01	4	0	0	0	0.184444
<i>Ficus</i> sp. 02	2	0	0	0	0.307407
<i>Ficus</i> sp. 05	1	0	0	0	0.46111
<i>Ficus</i> sp. 06	2	0	0	0	0.307407
<i>Ficus congesta</i>	2	0	0	0	0.307407
<i>Ficus</i> cf. <i>carpenteriana</i>	1	0	0	0	0.46111
<i>Ficus cumingii</i>	3	0	0	0	0.230555
<i>Ficus</i> sp. 11	3	0	0	0	0.230555
<i>Ficus pseudopalma</i>	3	0	0	0	0.230555
<i>Ficus septica</i>	3	0	0	0	0.230555
<i>Ficus</i> sp. 14	2	0	0	0	0.307407
<i>Ficus variegata</i>	3	0	0	0	0.230555
<i>Gardenia pseudopsidium</i>	6	0	0	0	0.131746
<i>Glochidion</i> sp. 01	4	0	0	0	0.184444
<i>Glochidion</i> sp. 02	3	0	0	0	0.230555
<i>Glycosmis</i> cf. <i>trifoliata</i>	18	0	0	0	0.048538
<i>Gomphandra luzoniensis</i>	2	0	0	0	0.307407
<i>Homalium</i> sp. 01	40	0	0	0	0.022493
Unidentified sp. 09	1	0	0	0	0.46111
Unidentified sp. 14	6	0	0	0	0.131746
Unidentified sp. 17	2	0	0	0	0.307407
<i>Kibara coriaceae</i>	3	0	0	0	0.230555
<i>Lithocarpus</i> sp. 03	30	0	0	0	0.029749
<i>Lithocarpus</i> sp. 04	10	0	0	0	0.083838
<i>Lithocarpus</i> sp. 05	1	0	0	0	0.46111
<i>Litsea</i> sp. 01	2	0	0	0	0.307407
<i>Melicope</i> sp. 01	1	0	0	0	0.46111
<i>Myristica</i> cf. <i>philippinensis</i>	5	0	0	0	0.153703
<i>Neolitsea</i> cf. <i>lanceolata</i>	25	0	0	0	0.03547
<i>Palaquium</i> cf. <i>cuneifolium</i>	4	0	0	0	0.184444
<i>Palaquium</i> cf. <i>foxworthyi</i>	5	0	0	0	0.153703
<i>Palaquium</i> cf. <i>lanceolatum</i>	1	0	0	0	0.46111
<i>Palaquium</i> cf. <i>philippense</i>	5	0	0	0	0.153703
<i>Phyllantaceae</i> sp. 01	1	0	0	0	0.46111
<i>Planchonella</i> sp. 01	6	0	0	0	0.131746
<i>Radermachera pinnata</i>	5	0	0	0	0.153703
<i>Scolopia</i> sp. 01	11	0	0	0	0.076852
<i>Scolopia luzonensis</i>	3	0	0	0	0.230555
<i>Shorea astylosa</i>	7	0	0	0	0.115277
<i>Shorea guiso</i>	44	0	0	0	0.020494
<i>Shorea polysperma</i>	7	0	0	0	0.115277

Table S7. List of 88 species with 0% recruitment rate (cont.)

Species	N ₂₀₁₁	D ₂₀₁₅	Annualized mean rate (%/year)	Confidence interval	
				Lower	Upper
<i>Sterculia</i> cf. <i>ceramica</i>	2	0	0	0	0.307407
<i>Sterculia</i> sp. 03	4	0	0	0	0.184444
<i>Symplocos</i> sp. 02	1	0	0	0	0.46111
<i>Syzygium</i> sp. 05	13	0	0	0	0.065873
<i>Syzygium</i> sp. 07	6	0	0	0	0.131746
<i>Syzygium</i> sp. 08	4	0	0	0	0.184444
<i>Syzygium</i> sp. 10	1	0	0	0	0.46111
<i>Syzygium</i> sp. 12	5	0	0	0	0.153703
<i>Turpinia</i> sp. 01	9	0	0	0	0.092222